

Title (en)

AN EFFICIENT CRYOPRESERVATION DEVICE PREVENTING THE DIRECT CONTACT BETWEEN SAMPLES AND EXTRACELLULAR ICE

Title (de)

EFFIZIENTE KRYOKONSERVIERUNGSVORRICHTUNG ZUR VERHINDERUNG DES DIREKTEN KONTAKTS ZWISCHEN PROBEN UND EXTRAZELLULÄREM EIS

Title (fr)

DISPOSITIF DE CRYOCONSERVATION EFFICACE EMPÊCHANT LE CONTACT DIRECT ENTRE LES ÉCHANTILLONS ET LA GLACE EXTRACELLULAIRE

Publication

EP 3843545 A4 20211117 (EN)

Application

EP 19854394 A 20190830

Priority

- US 201862724959 P 20180830
- US 2019048986 W 20190830

Abstract (en)

[origin: WO2020047369A2] A cryoprotective device protects an aqueous biological material from mechanical damage due to ice formation during cryogenic freezing and/or cryostorage by preventing direct contact of the biological material with cell- damaging large ice crystals, the cryoprotective storage device having a housing with an internal cavity. The housing is configured to receive a freezable medium with the biological material within the internal cavity. The housing includes a semi-permeable membrane. The membrane is impermeable to ice crystals that are larger than an average pore size of the membrane to prevent such ice crystals from passing into the internal cavity from outside the housing, such that ice crystals formed in the medium within the housing have a smaller crystal size from ice crystals formed in the medium outside of the housing. As such, the biological material is protected from mechanical damage generated by direct contact with large ice crystals.

IPC 8 full level

A01N 1/02 (2006.01)

CPC (source: EP US)

A01N 1/0221 (2013.01 - EP US); **A01N 1/0268** (2013.01 - EP US); **C08L 1/02** (2013.01 - US)

Citation (search report)

[XAI] WO 2014138671 A2 20140912 - VIACYTE INC [US]

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2020047369 A2 20200305; **WO 2020047369 A3 20200409**; CN 112638157 A 20210409; CN 112638157 B 20240109; EP 3843545 A2 20210707; EP 3843545 A4 20211117; JP 2021534787 A 20211216; JP 7398434 B2 20231214; US 2021195890 A1 20210701

DOCDB simple family (application)

US 2019048986 W 20190830; CN 201980055919 A 20190830; EP 19854394 A 20190830; JP 2021510751 A 20190830; US 201917272637 A 20190830